INDIVIDUAL PROPERTY/DISTRICT
MARYLAND HISTORICAL TRUST
INTERNAL NR-ELIGIBILITY REVIEW FORM

Property/District Name: Bridge #15036, I-270 over MD109 and Little Bennett Creek
Survey Number: ~~M:12-52~~ M:10-81

Project: Bridge repair Agency: SHA

Site visit by MHT Staff: _X_ no ___ yes Name _____ Date _____

Eligibility recommended _____ Eligibility **not** recommended _X_

Criteria: _X_A ___B _X_C ___D Considerations: ___A ___B ___C ___D ___E ___F ___G ___None

Justification for decision: (Use continuation sheet if necessary and attach map)

SHA Bridge #15036, I-270 over MD 109 and Little Bennett Creek, Hyattstown, Montgomery County, Maryland is a rolled metal girder beam bridge which was constructed in 1952. It is a dualized bridge, each carrying 2 lanes of traffic. The bridge is supported by concrete abutments and 3 sets of concrete piers or bents. The bridge is in poor condition: wood planking has been installed below the deck to protect cars and pedestrians passing under the bridge, the sufficiency rating is in the 50s, and the concrete is spalling, leaving rebar exposed. Based on this information, in addition to the less than 50 years construction date, Bridge #115036 is not eligible for inclusion in the National Register under criterion A (example of Maryland's transportation history) or criterion C (engineering).

Documentation on the property/district is presented in: Project Review and Compliance File

Prepared by: Heather Confer, SHA

Anne E. Bruder — March 24, 1999
Reviewer, Office of Preservation Services — Date

NR program concurrence: X yes ___ no ___ not applicable

[signature] — 3/25/99
Reviewer, NR program — Date

M:10-81

Survey No. ~~M:12-52~~

MARYLAND COMPREHENSIVE HISTORIC PRESERVATION PLAN DATA - HISTORIC CONTEXT

I. Geographic Region:

_____ Eastern Shore	(all Eastern Shore counties, and Cecil)
_____ Western Shore	(Anne Arundel, Calvert, Charles, Prince George's and St. Mary's)
__X__ Piedmont	(Baltimore City, Baltimore, Carroll, Frederick, Harford, Howard, Montgomery)
_____ Western Maryland	(Allegany, Garrett and Washington)

II. Chronological/Developmental Periods:

_____ Paleo-Indian	10000-7500 B.C.
_____ Early Archaic	7500-6000 B.C.
_____ Middle Archaic	6000-4000 B.C.
_____ Late Archaic	4000-2000 B.C.
_____ Early Woodland	2000-500 B.C.
_____ Middle Woodland	500 B.C. - A.D. 900
_____ Late Woodland/Archaic	A.D. 900-1600
_____ Contact and Settlement	A.D. 1570-1750
_____ Rural Agrarian Intensification	A.D. 1680-1815
_____ Agricultural-Industrial Transition	A.D. 1815-1870
_____ Industrial/Urban Dominance	A.D. 1870-1930
__X__ Modern Period	A.D. 1930-Present
_____ Unknown Period (___ prehistoric ___ historic)	

III. Prehistoric Period Themes:

_____ Subsistence
_____ Settlement
_____ Political
_____ Demographic
_____ Religion
_____ Technology
_____ Environmental Adaptation

IV. Historic Period Themes:

_____ Agriculture
_____ Architecture, Landscape Architecture, and Community Planning
_____ Economic (Commercial and Industrial)
_____ Government/Law
_____ Military
_____ Religion
_____ Social/Educational/Cultural
__X__ Transportation

V. Resource Type:

Category: Structure
Historic Environment: Rural
Historic Function(s) and Use(s): Bridge -- traffic crossing
Known Design Source: State Roads Commission

M:10-81

MHT No. ~~M:12-52~~

Historic Bridge Inventory
Maryland State Highway Administration
Maryland Historical Trust

Name and SHA No. *I-270 over MD 109 and Little Bennett Creek No. 15036*

Location:
Street/Road name and Number: *I-270 over MD 109 and Little Bennett Creek*

City/Town: *Hyattstown* **Vicinity** *X*
County: *Montgomery*
Ownership: *X* State County Municipal Other
This bridge projects over: *X* Road Railway *X* Water Land

Is the bridge located within a designated district: yes *X* no
NR listed district NR determined eligible district
Locally designated other
Name of District

Bridge Type:

Timber Bridge
Beam Bridge Truss-Covered Trestle
Timber-and-Concrete

Stone Arch

Metal Truss Bridge

Movable Bridge
Swing Bascule Single Leaf Bascule Multiple Leaf
Vertical Lift Retractile Pontoon

Metal Girder
X Rolled Girder Rolled Girder Concrete Encased
Plate Girder Plate Girder Concrete Encased

Metal Suspension
Metal Arch
Metal Cantilever

Concrete
Concrete Arch Concrete Slab Concrete Beam Rigid Frame

Other Type Name

M:10-81

Description:

Describe Setting:

Bridge No. 15036 carries I-270 over MD 109 and Little Bennett Creek adjacent to Little Bennett Regional Park. To the north and south of the bridge are entrance and exit ramps to the highway. The area surrounding the bridge is wooded with mostly recent growth and small trees, only a few mature trees exist as most were removed during the construction of the interchange. The topography is gently rolling. MD 109 passes over Little Bennett Creek on a rolled steel beam structure northeast of the main I-270 overpass structure. Previously there was a single span 1916 concrete arch bridge over the creek. According to plans this was a Luten arch.

Describe Superstructure and Substructure:

The I-270 bridge/overpass is constructed of 4 rolled steel beam simple spans . It is a dualized bridge, with both the north and south bound sides carrying two lanes of traffic. Each side of the bridge is approximately 160 long. The four spans, starting from the south, measure approximately 29', 40',52' and 60' respectively. This bridge was built with an out to out width of 36'8" and a clear roadway width of 30'. Each side of the bridge(two lanes) is supported by 7 steel beams evenly spaced at 5'6". The outside edges of the bridge, those visible from MD 109, have detailed open metal work railings while the inside edges have a less detailed, more plain metal railing. The sections of metal railing are fastened to metal posts with concrete covers. The concrete endposts curve slightly toward the ground with formed decorative geometric design on the outside of the lanes. A section of concrete was added to the endposts to allow a metal W guard rail to be attached to the endposts. The guard rail runs back from the endposts a sufficient distance to ensure safety.

The bridge is supported by concrete abutments and three sets of concrete piers or bents. The piers are continuous between the two sides of the bridge with eight (8) columns. The pier caps form seven (7) arches over the top of the columns. The outside edges of the piers have a geometric design matching the railing endposts. The north and south bound lanes of the bridge are each supported by the two arches at either end of the pier. The three arches in the middle were built to accommodate future expansion of the bridge.

The bridge carries I-270 over MD 109 and Little Bennett Creek. MD 109 was relocated to its present location during the construction of this overpass in 1951. The previous bridge at the crossing of the road and creek was a 1916 Luten concrete arch bridge. Currently a steel beam bridge, built at the same time as the overpass, carries MD 109 over the creek. The creek was diverted and channelized to flow between the two northern piers. Decorative metal railing, the same as on the overpass, protects traffic from driving into the creek. A modern jersey barrier protects the metal railing from the traffic.

The bridge is in poor condition with an overall sufficiency rating in the 50's and a very low deck rating. The deck exhibits severe concrete degradation. There is severe spalling with exposed aggregate on the deck surface, especially at the joints. The curbs have exposed aggregate and exposed rebar. Wood planking has been installed underneath the deck to protect cars and pedestrians passing under the bridge from being

damaged or injured by falling concrete. The metal railing has chipped, peeling paint and is rusted, with sections missing or damaged from traffic collisions.

The exterior steel beams have been hit by traffic and are damaged and bowed. The interior beams have been scraped by vehicles exceeding the clearance and are bent and mis-aligned. The beams have cracks, severe rusting, and section loss at the pier caps. The diaphragms have pulled loose from the web fascia beam at some points and broken through beams at other points. All of these conditions contribute to the metal fatigue in the beams. The beams also have lead paint.

The piers and pier caps are also in poor condition. There is extreme cracking in the pier caps (the arch section), one of the cracks appears to go the whole way through the concrete. When struck with a hammer during inspections the caps sound hollow which indicates a high degree of concrete deterioration. The piers have cracking and spalling with exposed aggregate and rebar. The retaining wall for the creek bed has the same cracking, spalling and exposed aggregate and rebar. Most of the concrete damage has been patched with gunnite at least once. This is a cosmetic repair and does not contribute to the structural integrity of the bridge.

The abutments display the same degree of concrete degradation as the deck and the piers and caps. There is cracking, spalling, and exposed aggregate. The salt and slush from winter run-off and rainwater have damaged the abutment seats to the point that there is almost 100 percent loss of materials. Overall the bridge is in poor condition.

Discuss major alterations:

A concrete section was added to the railing endposts in order to attach the W guard rail. The decorative metal railing was removed from small steel beam structure that carries MD 109 over the creek. Gunnite has been applied to the piers, pier caps, retaining walls, and abutments.

History:
When Built: *1951*
Why Built: *Relocation of US 240, the Washington National Pike.*
Who Built: *State Roads Commission, Baltimore Contractors, Inc.*
Who Designed: *State Roads Commission*
Why Altered: *Safety.*

Was this bridge built as part of an organized bridge-building campaign?

No, this bridge was not built as part of an organized bridge-building campaign. It was built when US 240 was relocated.

Surveyor Analysis:
This bridge may have NR significance for association with:

Criterion A: Events Criterion B: Person
Criterion C: Engineering/Architectural Character

This bridge does not have National Register significance. It is typical of multi-span steel beam bridges built by the State Roads Commission in the late 1940's and early 1950's. Furthermore, it is not yet 50 years old and exhibits severe deterioration.

Was the bridge constructed in response to significant events in Maryland or local history?

This bridge was built as part of the reconstruction and relocation of US 240. Early maps show that a road connecting Frederick to Washington, DC has existed at or around this location for a very long time. Maps dated from as early as 1757 denote a road traveling from Frederick to Bladensburg. An 1833 map designated this route as a stagecoach road. From Frederick it passed through "Hayatt Town", Clarksburg, Middlebrook, Seneca, and Rockville. At Rockville the road split, one split following the original path to Bladensburg, the other passing through Simsonville and into the District of Columbia ending at Georgetown. This unimproved road, called the Georgetown Road, served the local communities and travelers until the advent of the State Roads Commission.

Between 1910 and 1920 the State Roads Commission worked to bring the Georgetown Road onto the State roads system. During this time it improved a section from Frederick south toward Urbana. From 1920-1930 it improved a section from Washington, DC north to Clarksburg. By 1930, the Georgetown Road was designated US 240. After World-War II, US 240 was on line for relocation and modernization. Work on the new US 240, the Washington National Pike, began at the City of Frederick and continued to the Frederick County line. By 1950, the next section of highway was under construction. This section, which would go from the Frederick/Montgomery County border and travel 3.8 miles south to Clarksburg, included the Hyattstown interchange. This road replaced old US 240 as the major traffic artery from Frederick to Washington DC.

By 1959 this road was known as I-70S, with the road to Baltimore being I-70N. Later with the advent of more interstate highways and a more standardized numbering system, this road became I-270.

When the bridge was built and/or given a major alteration, did it have a significant impact on the growth and development of the area?

It is possible that the construction of the new US 240 and this bridge had an negative impact on the growth and development of the small towns that it by-passed because travelers no longer had to pass through these towns. It is also possible that these towns experienced a later boom in residential growth due to their proximity to Frederick and Washington, DC and the ease of commuting due to the highway.

Is the bridge located in an area that may be eligible for historic designation and would the bridge add to or detract from the historic and visual character of the possible district?

No. This bridge is not located in an area that is eligible for historic designation.

Is the bridge a significant example of its type?

No. Despite aesthetic elements and a progressive design allowing future expansion bridge 15036 is typical of steel beam bridges built by the State Roads Commission at the time.

Though it may seem odd today to think that planners in the 40's and 50's could foresee the need for future bridge expansions, it was not uncommon. Bridge No. 15036 was not the only State Roads bridge built with future growth in mind. Bridge No. 22003, US13 Bus over B&ORR, in Wicomico County was built with similar piers that appear to be expandable. The Patuxent River bridge on US 29 was built with expandable piers to allow for future dualization. Both of these bridges have since accommodated increased transportation demands through anticipated roadway widening similar to that proposed for Bridge 15036.

Does the bridge retain integrity of the important elements described in the Context Addendum?

No. The integrity of this bridge is compromised by its condition. While it retains its original rolled beams, railing, abutments, and piers/bents, the condition of these elements is so poor that they can no longer safely serve their function due to loss and compromise of historic fabric. As previously discussed, the steel beams are cracked, rusted, bent, and misaligned. They have experienced section loss and they have lead paint issues. The metal railing is rusted and broken and does not meet AASHTO standards. The abutments and piers both exhibit a high degree of concrete deterioration with cracking and spalling. There are many sections with exposed aggregate and exposed rebar.

Is the bridge a significant example of the work of the manufacturer, designer, and/or engineer and why?

No. This bridge is an example of typical steel beam bridge construction by the State Roads Commission during the late 1940's and early 1950's. Steel beam bridges were constructed extensively throughout the state in the post World War II era.

Should this bridge be given further study before significant analysis is made and why?

No further study is necessary to determine that this bridge is not eligible for the National Register of Historic Places. It is a typical steel beam bridge less than 50 years old, retaining little integrity due to its condition.

M:10-81

Bibliography:

Historic Highway Bridges in Maryland:1631-1960: Historic Context Report. P.A.C. Spero & Co. and Louis Berger & Associates. July 1995.

Papenfuss, Edward C. And Joseph M. Coale III, ed. The Hammond Harwood House Atlas of Historical Maps of Maryland, 1608-1908. The Johns Hopkins University Press. Baltimore. 1982.

Report of the State Roads Commission of Maryland. 1927-1930, 1951-1952, 1953-1954, 1957-1958.

State Roads Commission. Tomorrow's Roads Today: Twenty-seventh Biennial Report: for the fiscal years 1959-1960.

Provide black and white prints and negatives and color slides of bridge, details, and setting labeled according to NR Bulletin 16A and Maryland Supplement to Bulletin 16A.

Provide a USGS map illustrating the location of the bridge.

Surveyor:

Name: Heather M. Confer **Date:** February 22, 1999

Organization: State Highway Administration **Telephone:** 410-545-2899

Address: 707 N. Calvert St. Baltimore MD 21202

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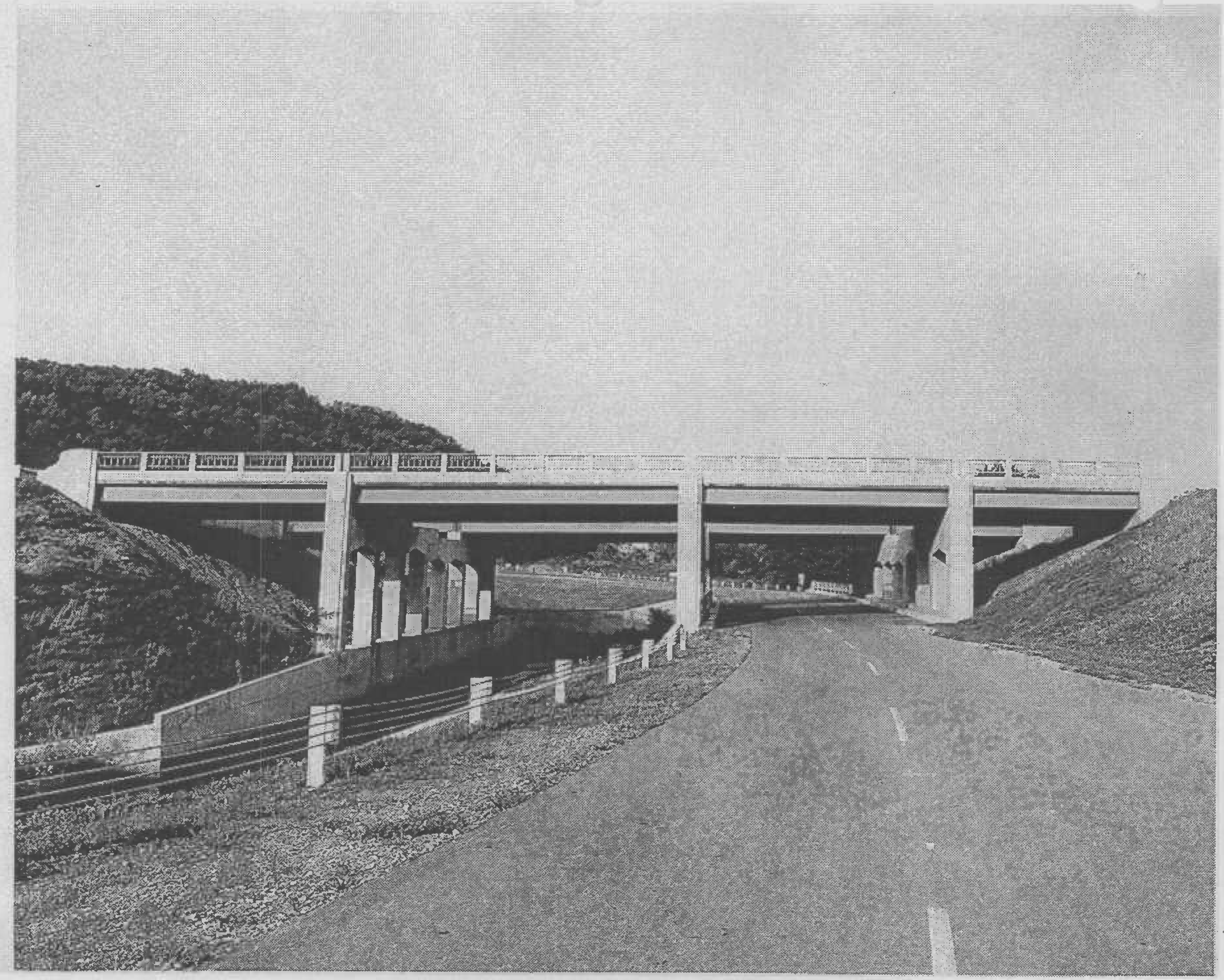

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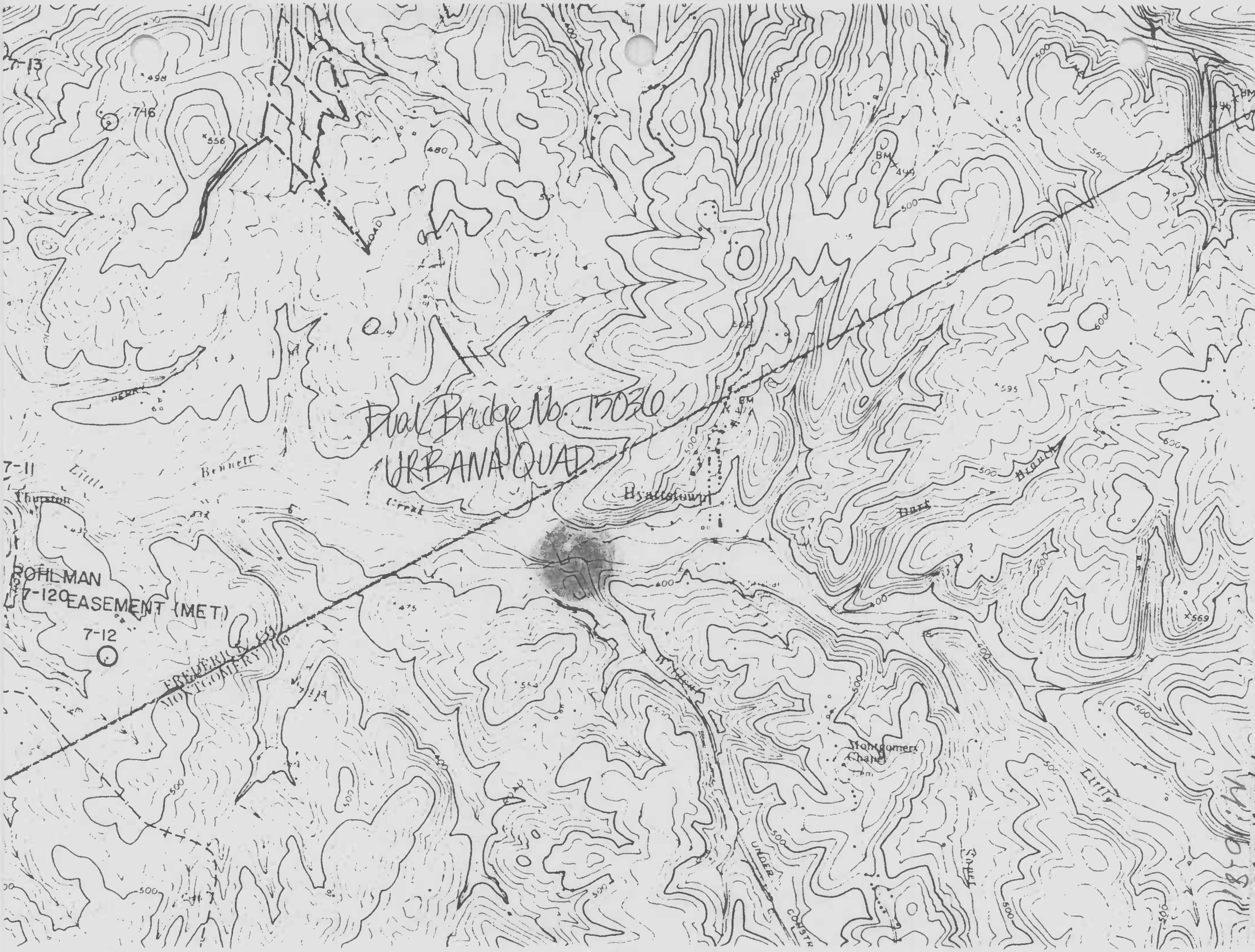
M:10-81


Dual Bridge No. 15036
URBANA QUAD
7-13
746
7-11
ROHLMAN
7-120
EASEMENT (MET)
7-12
FREDERICK CO
MONTGOMERY CO
Hyattstown
Montgomery Chapel
Little Bennett
Great
Bush Branch
UNDER CONSTR

MI10-84

Bridge #15036 I-270 over MD109 and Little Bennett Creek

Montgomery Co MD

Jill Dowling

12/16/98

MDSHPO

facing N, showing MD 109, I-270, and Little Bennett Creek (behind chain link fencing)

Notice continuous pier

#1 OF 10

M:10-81

Bridge # 15036 I-270 over MD 109 and Little Bennett Creek

Montgomery Co. MD

Jill Dowling

12/16/98

MDSHPO

facing North from MD 109 toward Little Bennett creek
under I-270 NB
Showing I-270S Bridge

#2 of 10

M: 10-81

Bridge #15036 I-270 over MD 109 and Little Bennett Creek

Montgomery Co. MD

Jill Dowling

12/16/98

MDSHPO

facing NE from west of SBI-270
SBI-270 in foreground
NBI-270
Note: detail of metal railing

3 of 10

Station
109

M:10-81

Bridge # 15036 I-270 over MD 109 and Little Bennett Creek

Montgomery Co. MD

Jill Dowling

12/16/98

MD SHPO

facing ESE. showing concrete piers for expansion.

4 of 10

M: 10-81

Bridge # 15036 I-270 over MD 109 and Little Bennett Creek

Montgomery Co. MD

Jill Dowling

12/16/98

MD51+00

facing S from east of NBI-270
NBI-270 in foreground

5 of 10

M:10-81

Bridge # 15036 I-270 over MD 109 and Little Bennett Creek

Montgomery Co. MD

Jill Dowling

12/16/98

MDSHPO

facing S from under I-270 showing I-270 bridge and concrete piers with room for expansion Little Bennett creek passes in the foreground

6 of 10

M:10-81

Bridge # 15036 I-270 over MD 109 and Little Bennett Creek

Montgomery Co. MD

Jill Dowling

12/16/98

MDSHPO

facing NE from under I-270SB showing MD109 over Little Bennett creek

7 of 10

M:10-81

Bridge #15036 I-270 over MD 109 and Little Bennett Creek

Montgomery Co MD

Jill Dowling

12/16/98

MDSHPO

facing SSE showing I-270 NB - detail of failing railing

8 of 10

M:10-81

Bridge # 15036 I-270 over MD 109 and Little Bennett Creek

Montgomery Co. MD

Jill Dowling

12/16/98

MD SHPO

facing S - Little Bennett Creek in foreground

9 of 9

M:10-81

Bridge # 15036 I-270 over MD 109 and Little Bennett Creek

Montgomery Co MD

Jill Dowling

12/16/98

MDSHPO

facing S showing MD 109 over Little Bennett and I-270.

10 of 10